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## AN EMPIRICAL INVESTIGATION OF FACTORS INFLUENCING ISLAMIC WEBSITES USE AND THEIR POSITIVE IMPACT FROM MUSLIM USER PERCEPTION

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### ABSTRACT

*The global explosion of the Internet and its continued use by individuals, Islamic organisations and scholars to spread their teachings and activities has witnessed massive growth over the years. However, it appears that online Islamic content and activities may lack credibility and authority, since the websites are anonymous and uncontrolled in comparison to the traditional face-to-face method of seeking Islamic knowledge. This paper empirically investigates the content and Islamic factors that influence use of Islamic websites by Muslim users and consequently the positive impact of those websites on their behaviour. The study examines the perception of online Muslim users on the impact of various content and Islamic factors on the use of Islamic websites and its subsequent effect on user behaviour. An exploratory factor analysis was conducted using SmartPLS 2.0; this produced seven factors, namely: content credibility, content objectivity, content reliability, Islamic identity, Islamic services, Islamic symbols, and Islamic ethical values. The findings of the study suggest that both Islamic and content factors are significant indicators for influencing Islamic website use. On the other hand, the findings show that out of the seven factors extracted, only the content reliability factor and Islamic ethical values factor have a weak influence on the use of Islamic websites. In summary, the study indicates that the use of Islamic websites has a positive impact on users towards being better practising Muslims. Finally, the research model and empirical results provide valuable indicators for the direction of future research and also suggest guidelines for developing Islamic websites that will successfully meet users' needs and expectations.*

*Keywords: Islamic websites, content factors, user perception, website use, positive impact.*

### INTRODUCTION

The use of the Internet as a medium to spread and improve Islamic teachings and practices has become widespread in recent years. Currently, numerous Islamic websites are in existence and are mostly devoted to spreading the message of Islam and improving the Islamic way of life through various activities. Consequently, several definitions of Islamic website have been put forward by academics and professionals in relevant fields. An Islamic website is widely regarded as an Internet-based site created for and devoted to the service of the Islamic religion and Islamic way of life.

Various scholars in their attempt to provide a definition of Islamic website have placed emphasis on specific elements of the website's expected service delivery options. Accordingly, Bunt (2003) is of the view that in the process of defining an Islamic website it is important that authors consider "what makes a website 'authoritative' and 'Islamic' as a key question, particularly for readers who may not be familiar with the nuances and various shades of meaning that exist between diverse Muslim interests".

Therefore, Bunt (2003) coined the term ‘Cyber Islamic Environments’ as an umbrella term which can refer to a variety of contexts, perspectives and applications of the Internet by Muslim users. He stressed that “Cyber Islamic Environments have the potential to transform aspects of religious understanding and expression within Muslim contexts, and the power to enable elements within the Muslim populations in minority and majority arenas to dialogue with each other.” However, Bunt reported that some readers have expressed reservations about the term Cyber Islamic Environments, especially for failing to relate the term to some Islamic perspectives.

Additionally, some researchers who empirically studied Islamic websites and Islamic activities online have defined the environment from Islamic cultural perspectives. For instance, Wan Abdul Rahim et al. (2008) defined an Islamic website “as a genre website that accentuates Islamic ideologies, norms, and values”. Also, Murni et al. (2011) defined it “as a website whose main objective is to portray the commandments of Allah in accordance with the teachings of Prophet Muhammad (*pbuh*)”.

Although these definitions are based on different concepts, they employ similar definitional approaches. Wan Abdul Rahim et al. (2008) viewed Islamic websites as culture-centred websites, whereas Murni et al. (2011) proposed a broader definition that includes the fundamental teachings of Islam. This study takes a simple view and defines an Islamic website as a means of conveying Islamic teachings and practice through a website. This view is recognized for its simplicity, clarity, its relevance to the objective of this study and does not contradict any other definition of an Islamic website. Our thrust in this study is to identify the Islamic websites’ content and Islamic factors that influence website use and have a positive impact on users. These factors are expected to positively draw users to an Islamic website and facilitate a positive effect in their performance of Islamic activities online.

The survey items listed in Table 1 were generated from three sources: (1) from our previous studies and other related literature, (2) from researchers’ individual face-to-face discussion with three Islamic scholars from the Department of Islamic Revealed Knowledge of International Islamic University Malaysia, and (3) from the researchers’ individual assessment of three popular Islamic websites, namely islamicity.com, islamweb.net, and islamonline.net.

TABLE 1. Identified survey items from three different sources

Code	Survey items	Sources
<b>Credibility</b>		
CRD1	Website owned by Muslims	<b>Developed from</b> Aliyu et al. (2012), Mahmud et al. (2010), Aliyu et al. (2010), Kasmani et al. (2008), Suleman (2005), Daniels (2004), and discussion with three Islamic scholars.
CRD2	Website hosted/managed by Muslims	
CRD3	Website clearly defined aims/objectives	
CRD4	Website owners' credentials provided	
CRD5	Website scholar's/author's credentials provided	
CRD6	Use of renowned Islamic books for reference	
CRD7	Use of renowned Islamic scholar's opinion	
CRD8	Website owner's Islamic sect (e.g. <i>sunni</i> )	
CRD9	Website owner's Islamic ideology (e.g. <i>salafi</i> or <i>sufi</i> )	
CRD10	Website owner's Islamic school of thought ( <i>Mazhab</i> )	
<b>Objectivity</b>		
OBJ1	No misleading information	<b>Developed from</b> Aliyu et al. (2012), Mahmud et al. (2010), Aliyu et al. (2010), Kasmani et al. (2008), Suleman (2005), and discussion with three Islamic scholars.
OBJ2	No personal bias information	
OBJ3	No innovative ( <i>Bid'ah</i> ) information	
OBJ4	No bias interpretation of the Quran	
OBJ5	No bias interpretation of the Hadith(s)	
OBJ6	No discrimination against all the Sahabah	
OBJ7	No racial/ethnic biased/stereotyped information	
OBJ8	No biased information against other scholars' opinions	
OBJ9	No biased information against other ideologies (e.g. <i>Salafi</i> , <i>Sufi</i> )	
OBJ10	No information against other schools of thought ( <i>Madh'habs</i> )	

<b>Reliability</b>		
RLB1	Complete references	<b>Adapted from</b> Aliyu et al. (2012), Mahmud et al. (2010), Aliyu et al. (2010), Kasmani et al. (2008), Daniels (2004), Kim et al. (2009), Song and Zinkhan (2003), Zeithaml et al. (2002), Yang (2001), Parasuraman et al. (1988),
RLB2	Up-to-date information	
RLB3	Link to original sources	
RLB4	Accurate information	
RLB5	Consistent information	
RLB6	Date of document creation	
RLB7	Comprehensive information	
RLB8	Information that satisfies my needs	
RLB9	Information that meets my expectations	
RLB10	Keeps information on the website for long time	
<b>Symbols</b>		
SYM1	Use of Arabic text	<b>Developed from</b> Aliyu et al. (2012); Mehad et al. (2010), Kasmani et al. (2008), and assessment of popular three Islamic websites (islamicity.com, islamweb.net, and islamonline.net)
SYM2	Use of Islamic art	
SYM3	Displaying picture of Hijab	
SYM4	Displaying picture of Moon	
SYM5	Displaying picture of Quran	
SYM6	Displaying picture of Ka’aba	
SYM7	Displaying picture of scholars	
SYM8	Displaying picture of mosques	
<b>Services</b>		
SEV1	Donate online services	<b>Developed from</b> assessment of popular three Islamic websites (islamicity.com, islamweb.net, and islamonline.net)
SEV2	Chat with online scholars	
SEV3	Islamic software/applications	
SEV4	Bazaar/online shopping services	
SEV5	Community development services	
SEV6	Interest-free financial transactions	
SEV7	Online relief and assistance services	
SEV8	Online marriage/matrimony services	
SEV9	Online educational training services	
SEV10	Direct call services to online scholars	
<b>Identity</b>		
IDT1	Website starts with “ <i>bismillah rahmani rahim</i> ”	<b>Developed from</b> Aliyu et al. (2012), Mehad et al. (2010), and discussion with three Islamic scholars, and assessment of three popular Islamic websites (islamicity.com, islamweb.net, and islamonline.net)
IDT2	Uses the word “ <i>Islam</i> ” as part of it URL name	
IDT3	Website portrays belief in the oneness of Allah (S.W.T.)	
IDT4	Website follows the authentic traditions ( <i>Sunna</i> ) of the prophet Muhammad (S.A.W.)	
IDT5	Website follows the practice of all the Sahabah (R.A.)	
IDT6	Website follows the teachings of the four Sunni <i>Madh’hab</i> s (i.e. Hanafi, Maliki, Shafi’i, Hanbali)	
IDT7	Website uses “ <i>As-salamu alaykum warahamatullah wabarakatuh</i> ” at the beginning of messages	
IDT8	Website consistently writes the name of Allah with “ <i>Subhanahu Wa Ta’ala/ (S.W.T.)</i> ”	
IDT9	Website consistently writes the name of the prophet Muhammad with “ <i>sallallahu alayhi wasallam /(S.A.W.)</i> ”	
IDT10	Website consistently writes the name of other Prophets (e.g. Moses, Jesus) with “ <i>Alayhi sallam/(A.S.)</i> ”	
IDT11	Website consistently writes the name of all the Sahabah with “ <i>Radhiallahu Anhu/ (R.A.)</i> ”	
IDT12	Website consistently uses the words “ <i>Assalam alaikum</i> ”, “ <i>Mashaallah</i> ”, “ <i>Alhamdulillah</i> ”, and/or “ <i>Jazakallahu khairan</i> ” in communication with users	
<b>Ethical Values</b>		
EVL1	Teaching fairness/justice	<b>Adapted from</b> Aliyu et al. (2012), Hameed (2009), Ahmadian, Nordin, and Rawi (2010), and discussion with three Islamic scholars.
EVL2	Teaching sincerity/honesty	
EVL3	Teaching patience/tolerance	
EVL4	Teaching caring/thankfulness	
EVL5	Portraying good model/guidance	
EVL6	Promoting good and discouraging bad deeds	
EVL7	Providing beneficial/helpful information	
EVL8	Securing user’s data and information properly	
<b>Website Use</b>		
USE1	I frequently use Islamic website	<b>Adapted from</b> Kim et al. (2009), Porter and Donthu (2006), Rai et al. (2002), DeLone and McLean (1992)
USE2	I spend a lot of time using Islamic website	
USE3	I have been using Islamic website for a very long time	
USE4	I am highly dependent on using Islamic website to learn about Islam	
USE5	Overall, I have good experience using Islamic website	
<b>Positive Impact</b>		
PSI1	I am motivated to keep using Islamic website	<b>Developed from</b> discussion with three Islamic scholars and
PSI2	I can encourage other people to use Islamic website	
PSI3	I think using Islamic website can increase my religious knowledge	

<b>PSI4</b>	I think using Islamic website can improve my religious practice	assessment of three popular Islamic websites (islamicity.com, islamweb.net, and islamonline.net)
<b>PSI5</b>	I think using Islamic website can bring me closer to Allah	
<b>PSI6</b>	I think using Islamic website can increase my <i>Iman</i> (faith)	
<b>PSI7</b>	I think using Islamic website can change me to a better Muslim	
<b>PSI8</b>	I think using Islamic website can influence me to do good actions	
<b>PSI9</b>	I think using Islamic website can influence me to avoid bad actions	
<b>PSI10</b>	Overall, I think using Islamic website can change me positively	

## RESEARCH MODEL AND HYPOTHESES

### RESEARCH MODEL

Generally, users may perceive an Islamic website as an alternative medium to accomplish several religious activities online, such as reading and learning Quran, Hadith, Fiqh, and seeking for scholars' opinion (*fatwa*). This perception may emanate from website contents. Accordingly, it can be argued that contents and Islamic factors related to Islamic websites may have a significant impact on the user's opinion and website use. Thus, we propose the eight hypotheses described in section 2.2 (and see H1, H2, H3, H4, H5, H6, H7, and H8 in Figure 1).

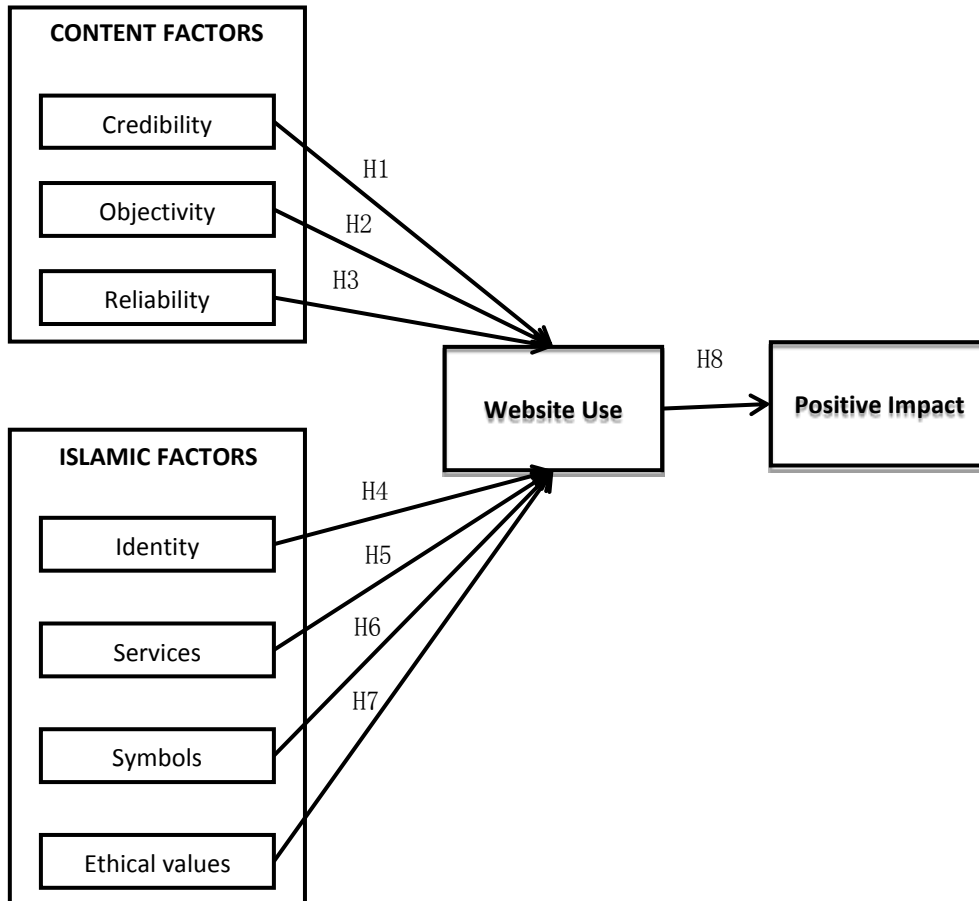


FIGURE 1. Model of Islamic website use and positive impact

In order to explore the content and Islamic factors and their measurement items, we propose the research model depicted in Figure 1. This model is designed based on the factors and related items identified in Table 1. In the proposed model, we conceptualize that both content and Islamic factors are positively associated with use, and use is positively associated

with positive impact. To test the proposed model we developed several hypotheses in the next section (2.2).

#### RESEARCH VARIABLES AND HYPOTHESES

Islamic website factors can easily be identified from users' evaluation of content. This follows the generally accepted definition of website content quality as being the 'extent to which users think that the information provided is useful, good, current, accurate, updated, and appropriate' (Song and Zinkhan, 2003; Loiacono et al., 2007). This is purely a content-based emphasis, which has the backing of some researchers who argue that content (Aliyu et al. 2012; Mahmud et al. 2011) and Islamic (Ahmadan, Nordin, and Rawi, 2010; Mehad et al., 2010; Hameed, 2009) factors are the most important measures for Islamic website evaluation. This study is therefore set up to examine how content and Islamic factors influence use of Islamic websites and whether they have a positive impact on users through performing Islamic activities online.

#### IMPACT OF CONTENT FACTORS ON THE USE OF ISLAMIC WEBSITES

Content factors play a vital role in shaping user behaviour towards online Islamic sites. These factors can help a user to confirm the source and authenticity of online articles and scholars' statements. Most importantly, the content factors aid the user in identifying the exact credentials of particular online scholar(s) who issue a *fatwa* on the website. Moreover, content factors are important attributes that create unique confidence to attract website visitors for repeat visits. The quality of these factors is reflected in the user's perception not only in website use but also in creating positive user experience. Content factors will be measured by the credibility, objectivity and reliability of the contents provided by Islamic websites. We propose the following hypotheses.

Credibility of content can be defined as content believability since credible information is believable information and comes from credible people. Researchers identify two key components of credibility: trustworthiness and expertise (Fogg et al., 2002). As such, the credibility of website content can be evaluated on the basis of the user's perception of the credibility of the information sources, authors, scholars' opinion, Islamic ideologies, and school of thought associated with the website.

H1: Content credibility is positively associated with Islamic website use.

Objectivity of content is the extent to which the material expresses facts or information without distortion by personal feelings or other biases (Alexander and Tate, 1999). An objective piece of information should include all contradicting points of view related to the topic under discussion, and should not incline to a particular position (Aliyu et al., 2012; Suleman, 2005). Mahmud et al. (2010) also define content objectivity as the extent to which a website is free from bias towards or against any Islamic group or people. Therefore, providing biased information can have a serious effect on the use of Islamic websites.

H2: Content objectivity is positively associated with Islamic website use.

Reliability of content refers to the website owners' ability, sincerity and willingness to provide and manage information (Kim et al., 2009; DeLone and McLean, 2003). Song and Zinkhan (2003) define reliability as the extent to which users think that the website is dependable, functions properly, and fulfils its promise. To fulfil its promise is to provide up-

to-date, accurate, consistent, comprehensive, and satisfactory information. As such, the use of Islamic websites is dependent on the quality of information provided. Therefore, content reliability may have a positive effect on the use of Islamic websites.

H3: Content reliability is positively associated with Islamic website use.

#### IMPACT OF ISLAMIC FACTORS ON THE USE OF ISLAMIC WEBSITES

Religious websites portray specific factors that are attributed to a particular religion. Such factors symbolically and operationally help users to easily identify that religion. Islamic websites use items that portray Islamic identity, symbols, ethical values and online services. These features can easily attract the user's trust and subsequent use of the website. For example, one of the most important features signifying a website as Islamic is the use of the word "Islam" as part of the URL name. Some researchers have explored commonly used Islamic features on Islamic websites (Hameed, 2009; Mehad et al., 2010; Ibrahim et al., 2010; Ishak et al., 2011).

Hameed (2009) defines Islamic ethical values as "a set of moral principles and guidance that recognizes what is right or what one should do or not". Hameed (2009) further identified the following Islamic ethical values as significant to Islamic websites: beneficence, sincerity, forgiveness, honesty, good model, guidance, keeping promise and secrecy, enjoining goodness & prohibiting badness, belief & piety, wisdom, thankfulness, patience, fairness, truth, mercy, and deep thought. Accordingly, Mehad et al. (2010) see the use of Islamic symbols on a website as the representation of good ethical values to the users. For example, a website may use liturgical Islamic image/objects: art, picture of Quran, Ka'aba, moon, mosque, woman in Hijab, and picture of scholars are indicative of the Islamic identity representing the ethical credentials of a website. These symbols are unique signs of Islamic identity.

Islamic factors can be measured by the way a website's content consistently shows respect and seeks blessings for the Prophet Muhammad, His companions, other Prophets, and the website's users. Islamic online services are regarded as the extent to which the website provides free spiritual resources and programmes for the benefit of the people. These online services are measured by the provision of free software/applications, chats/blogs/forums, educational training, community development programmes, online marriage opportunity, online donation, relief/assistance activities, and direct consultation with online scholars.

Based on the measures stated above, we therefore propose that the Islamic factors categorized as Islamic ethical values, symbols, identity, and online services may have positive effects on the use of Islamic websites. Thus, the following hypotheses are proposed:

H4: Islamic identity is positively associated with Islamic website use.

H5: Islamic services are positively associated with Islamic website use.

H6: Islamic symbols are positively associated with Islamic website use.

H7: Islamic ethical values are positively associated with Islamic website use.

#### IMPACT OF ISLAMIC WEBSITES USE ON USER BEHAVIOUR

A large volume of research has been devoted to the use of websites in various domains, especially in e-commerce and e-learning (DeLone and McLean, 2003; 2004). However, there appears to be insufficient research on the use of Islamic websites and their impact on change in the user's behaviour. Many researchers opine that website use can be measured in terms of number of visits, pattern of use, frequency of use, time spent on the website, dependency, and

overall experience of using the website (Kim et al., 2009; DeLone and McLean, 2004). DeLone and McLean (2004) further argued that website use is voluntary and can be measured as frequency of use, access time, use pattern, and dependency.

In this study, positive impact is defined as the extent to which users think that using Islamic websites can influence their behaviour towards good actions and prevent them from committing bad actions. A positive impact on user behaviour as a consequence of website use can be measured by motivation to keep using the website, encouraging other people to use the website, and an increase in Islamic knowledge, practice, *Iman* (faith), and closeness to Allah. It is believed that increased religious practice brings Muslims closer to Allah and that ultimately changes their behaviour to the good. Thus, we propose the following hypothesis:

H8: Islamic website use is positively associated with positive impact.

## RESEARCH METHODS

### DATA COLLECTION INSTRUMENT

A structured paper questionnaire was used to collect data to test the proposed hypotheses and validate the research model. The questionnaire consists of five sections: (A) demographic questions; (B) questions about experience with Islamic websites; (C) questions about content factors; (D) questions about Islamic factors; and (E) questions about use of Islamic websites and positive impact. All items except demographic data were assessed using 5-point Likert scales (5 = strongly agree – 1 = strongly disagree). To assess Islamic website experience, respondents were asked to answer how often they use Islamic websites and the time spent using them.

### POPULATION AND SAMPLE

The population for this study are Muslims who have experience using Islamic websites for any Islamic activity online (e.g. Q&A/fatwa, blog/forum, learning and reading Quran/Hadith, information/references search, audio/video downloads, current/news updates, and others). The International Islamic University Malaysia (IIUM) was selected for this study because almost all its students are Muslim and it is mandatory for each student to register for a minimum of one Islamic related course. These Islamic courses are designed to assist students to improve their Islamic knowledge and understanding. The courses require students to use online Islamic resources for their assignments, projects and term papers.

Moreover, the administration of the questionnaires was direct, therefore only students identified as Muslims by the researchers through appearance, nationality, and discussion were included in the sample. A total of 525 Muslim students formed the sample. These students were directly given the opportunity to voluntarily participate in the study. The sample size (N=525) is considered sufficient to meet the minimum satisfactory sample size in conducting factor analysis (Gefen et al., 2000) using partial least square (PLS) analysis (Chin, 1998; Gefen et al., 2000).

### DATA COLLECTION PROCEDURE

The survey questionnaire was administered from December 2012 to January 2013. The study used a convenient technique to administer the questionnaires directly to the students from

various faculties. The completion of the questionnaires took 10-15 minutes. A pen was distributed to respondents as a gift alongside the questionnaire to ease questionnaire completion. As a result, the majority of respondents completed and returned the questionnaires immediately, resulting in a high response rate. During the survey the researchers explained the purpose of the research.

Of the 525 respondents participating in the study, only 450 responses were found usable for the analysis. 39 out of the 75 unused questionnaires were dropped because the respondents answered 'NO' to the question "Do you use Islamic website(s)?" in section A, indicating that they never visited or performed any Islamic activity online. Their lack of experience in using Islamic websites disqualified them from participating in the study. The remaining 36 responses were eliminated due to large amounts of missing data, and carelessness.

## RESULTS

### DESCRIPTIVE ANALYSIS

A descriptive analysis of 450 Muslim students (70% undergraduate and 30% postgraduate) who have experience using Islamic websites was conducted. Slightly more than half of the respondents (56.9%) are from Malaysia, followed by Indonesians (6.7%) and the rest (36.4%) from 43 different countries. The respondents are nearly equally distributed in terms of gender (216 male and 234 female). 69.8% of the respondents are aged 15-24, 24.0% are 25-34, 5.6% are 35-44, and only 0.7% (N=3) are aged 45 or above. All respondents indicated that they use the Internet daily, with a majority (61.3%) spending 3-8 hours daily.

In terms of respondents' experience using Islamic websites, all of them answered 'YES' that they had performed one or more Islamic activity online via Islamic websites. When asked 'How often do you use Islamic websites' 12.9% said 'Always', 40.7% said 'Regularly', and 46.4% said 'Rarely'. About half the respondents indicated that they spend 11-20 minutes daily using Islamic websites, and only 8.9% that they spend more than 30 minutes. Respondents were asked to write the names/URLs of the Islamic website(s) they frequently use. Of the 59 Islamic websites mentioned, the following have the highest number of users: *iluvislam.com* (49.2%), *islamweb.net* (21.6%), *islamicity.com* (16.8%), *islamonline.com* (14.8%), *sultan.org* (11.8%), *islamway.net* (6.8%), and *zaharuddin.net* (4.1%). More than half of the respondents said they are using Islamic websites for information search and studying the Quran and Hadith; about half spend their time on Q&A, online fatwa, blogs, and forum-related activities. In addition to curiosity, searching good references and rich Islamic content for research are the major reasons why Muslim students use Islamic websites, as indicated by the respondents.

### CONSTRUCT RELIABILITY

Reliability refers to the extent to which items consistently measure high loading within a construct. It is the consistency of the item-level errors within a single factor. The most common way to test reliability is by computing Cronbach's alpha for each construct. Table 2 shows that the overall Cronbach alpha values range from 0.83 (credibility factor) to 0.95 (positive impact factor) which indicates the internal consistency of the overall construct, with reliability above the 0.7 mark (Nunnally, 1978). Also, we computed composite reliability (CR) of each construct range from 0.878 to 0.956, which is greater than the 0.6 mark (Fornell & Larcker, 1981). Therefore, all the factors examined in this study demonstrated acceptable construct reliability.



TABLE 2. Construct reliability and validity tests

	$\alpha$	CR	AVE	CRD	EVL	IDT	OBJ	PSI	RLB	SEV	SYM	USE
CRD	0.83	0.878	0.592	<b>0.769</b>								
EVL	0.93	0.944	0.678	0.283	<b>0.823</b>							
IDT	0.91	0.926	0.676	0.369	0.491	<b>0.822</b>						
OBJ	0.94	0.950	0.658	0.380	0.428	0.296	<b>0.811</b>					
PSI	0.95	0.956	0.688	0.317	0.469	0.425	0.256	<b>0.829</b>				
RLB	0.90	0.918	0.584	0.413	0.430	0.325	0.436	0.319	<b>0.764</b>			
SEV	0.90	0.918	0.584	0.350	0.380	0.370	0.333	0.328	0.388	<b>0.764</b>		
SYM	0.90	0.920	0.623	0.416	0.314	0.495	0.238	0.394	0.310	0.440	<b>0.789</b>	
USE	0.83	0.878	0.591	0.269	0.267	0.325	0.092	0.602	0.210	0.326	0.344	<b>0.769</b>

\*square root of AVE on diagonal

## CONSTRUCT VALIDITY

According to Hassanein and Head (2007), construct validity examines the extent to which a construct measures the variable of interest. That is, when items within the same construct correlate highly with each other then convergent validity is said to be achieved. Also, when the items within the same construct have a low correlation with items of other constructs, then discriminant validity is said to be achieved (Campbell & Fiske, 1959; Straub, 1989). Hair et al. (1995) recommended that an item is significant if its factor loading is greater than 0.50. The convergent and discriminant validity is satisfied since all the correlations with other factors did not exceed the 0.50 mark (Hair et al., 1995). Moreover, the diagonal square root of the average variance extracted (AVE) values exceeds the 0.5 mark (Fornell & Larcker, 1981). In addition, a discriminant validity can also be achieved with high factor-loadings (Kim et al. 2009) and relatively low cross-loadings. As Table 3 indicates, all the items have high loadings (> 0.70 mark) on their own construct with very low cross-loadings on other constructs in the model (Chin, 1998). This demonstrates satisfactory discriminant validity.

TABLE 3. PLS factor cross-loadings

Items	Credibility	Ethical Values	Identity	Objectivity	Positive Impact	Reliability	Services	Symbols	Use
CRD6	<b>0.7001</b>	0.3247	0.3001	0.4043	0.2824	0.5004	0.2788	0.2390	0.2062
CRD7	<b>0.7248</b>	0.3261	0.2828	0.3984	0.2554	0.4789	0.2829	0.2503	0.1853
CRD8	<b>0.8108</b>	0.2138	0.2671	0.2505	0.2181	0.3937	0.2537	0.3109	0.2053
CRD9	<b>0.8271</b>	0.1141	0.2798	0.2017	0.2231	0.2894	0.2477	0.3535	0.2328
CRD10	<b>0.7753</b>	0.1337	0.2932	0.2276	0.2435	0.3312	0.2877	0.4404	0.2006
EVL1	0.2426	<b>0.8067</b>	0.4267	0.4169	0.3790	0.3971	0.4182	0.3322	0.2206
EVL2	0.2532	<b>0.8395</b>	0.4347	0.3947	0.3623	0.3876	0.3385	0.2910	0.2008
EVL3	0.2248	<b>0.8634</b>	0.4017	0.3428	0.3834	0.3524	0.2716	0.2359	0.2129
EVL4	0.2012	<b>0.8331</b>	0.4065	0.3094	0.3936	0.3110	0.2733	0.2185	0.2486
EVL5	0.2439	<b>0.8509</b>	0.3963	0.3259	0.3990	0.3641	0.3074	0.2436	0.2134
EVL6	0.2449	<b>0.8423</b>	0.3958	0.3234	0.4435	0.3466	0.3004	0.2700	0.2490
EVL7	0.2197	<b>0.8112</b>	0.3705	0.3402	0.3725	0.3585	0.2743	0.2310	0.2067
EVL8	0.2409	<b>0.7308</b>	0.4035	0.3818	0.3370	0.3230	0.3255	0.2483	0.1915
IDT7	0.2465	0.3049	<b>0.7455</b>	0.1528	0.2911	0.2083	0.2724	0.3892	0.2140
IDT8	0.2743	0.3866	<b>0.8281</b>	0.2031	0.3105	0.2273	0.2745	0.3995	0.2246
IDT9	0.2982	0.4408	<b>0.8564</b>	0.2626	0.3496	0.2801	0.2556	0.3981	0.2523
IDT10	0.3250	0.3726	<b>0.8153</b>	0.2646	0.3499	0.2498	0.3078	0.4122	0.2624
IDT11	0.3231	0.4551	<b>0.8539</b>	0.2436	0.3824	0.2788	0.3051	0.3753	0.2963
IDT12	0.3356	0.4348	<b>0.8303</b>	0.2998	0.3888	0.3318	0.3849	0.4616	0.3249
OBJ1	0.3579	0.3821	0.2651	<b>0.7878</b>	0.1919	0.5401	0.3099	0.1799	0.0835
OBJ2	0.3114	0.3561	0.2475	<b>0.7919</b>	0.2089	0.4730	0.3113	0.2179	0.0740
OBJ3	0.3039	0.2780	0.2008	<b>0.7358</b>	0.1810	0.3938	0.2205	0.1301	0.0516
OBJ4	0.3218	0.4035	0.2471	<b>0.7908</b>	0.2273	0.4537	0.2882	0.2250	0.0324
OBJ5	0.3096	0.3823	0.2405	<b>0.7789</b>	0.1709	0.4623	0.2882	0.2118	0.0202
OBJ6	0.3078	0.3666	0.2198	<b>0.8386</b>	0.1954	0.4794	0.2761	0.1519	0.0658
OBJ7	0.3132	0.3540	0.2053	<b>0.8368</b>	0.2195	0.4429	0.2355	0.1576	0.0730
OBJ8	0.2877	0.3586	0.2492	<b>0.8512</b>	0.1873	0.4093	0.2493	0.1964	0.0644

<b>OBJ9</b>	0.2926	0.3152	0.2672	<b>0.8235</b>	0.2372	0.3540	0.2799	0.2195	0.0954
	0.3024	0.3455	0.2487	<b>0.8658</b>	0.2285	0.4126	0.2642	0.2379	0.1018
<b>OBJ10</b>									
<b>PSI1</b>	0.2516	0.3882	0.3827	0.2137	<b>0.7510</b>	0.3313	0.2785	0.3342	0.5598
<b>PSI2</b>	0.2488	0.3334	0.3576	0.2115	<b>0.7392</b>	0.2632	0.2435	0.2923	0.5311
<b>PSI3</b>	0.2841	0.4081	0.3337	0.2100	<b>0.8185</b>	0.3138	0.2478	0.2957	0.4762
<b>PSI4</b>	0.2889	0.4317	0.3265	0.2248	<b>0.8455</b>	0.2622	0.2760	0.2852	0.4847
<b>PSI5</b>	0.2551	0.3607	0.3371	0.1962	<b>0.8705</b>	0.2450	0.2736	0.3257	0.4910
<b>PSI6</b>	0.2375	0.3495	0.3107	0.1969	<b>0.8454</b>	0.2010	0.2502	0.3392	0.4723
<b>PSI7</b>	0.3031	0.4029	0.3988	0.2557	<b>0.8741</b>	0.2553	0.3008	0.3929	0.5089
<b>PSI8</b>	0.2664	0.4258	0.3662	0.1948	<b>0.8661</b>	0.2655	0.2707	0.3390	0.4887
<b>PSI9</b>	0.2411	0.3362	0.3474	0.1999	<b>0.8257</b>	0.2315	0.3027	0.3778	0.4688
<b>PSI10</b>	0.2386	0.4375	0.3407	0.2066	<b>0.8441</b>	0.2508	0.2647	0.2720	0.4757
<b>RLB1</b>	0.4406	0.3252	0.2280	0.3929	0.1700	<b>0.7734</b>	0.2916	0.2063	0.1645
<b>RLB2</b>	0.4295	0.3328	0.2405	0.4207	0.2414	<b>0.8033</b>	0.3452	0.2581	0.1698
<b>RLB3</b>	0.3701	0.2499	0.2154	0.3212	0.1824	<b>0.7044</b>	0.2895	0.2309	0.1589
<b>RLB4</b>	0.4228	0.3578	0.1985	0.4508	0.2941	<b>0.7572</b>	0.2600	0.1849	0.1156
<b>RLB5</b>	0.3730	0.3191	0.2277	0.4550	0.2745	<b>0.7553</b>	0.2935	0.2228	0.1163
<b>RLB7</b>	0.4370	0.3163	0.2555	0.4454	0.2237	<b>0.7812</b>	0.3093	0.2841	0.1447
<b>RLB8</b>	0.3410	0.3997	0.2949	0.4349	0.3094	<b>0.7924</b>	0.3030	0.2260	0.1963
<b>RLB9</b>	0.3427	0.3186	0.2947	0.3842	0.2582	<b>0.7405</b>	0.2680	0.2667	0.1803
<b>SEV1</b>	0.2166	0.2748	0.3241	0.2849	0.3345	0.2678	<b>0.7570</b>	0.3216	0.3075
<b>SEV2</b>	0.2851	0.3249	0.2976	0.2658	0.2324	0.2986	<b>0.7685</b>	0.3227	0.2775
<b>SEV3</b>	0.3063	0.2512	0.2669	0.2998	0.2091	0.3507	<b>0.7175</b>	0.2957	0.1800
<b>SEV4</b>	0.2694	0.2210	0.2698	0.2336	0.2097	0.2695	<b>0.7443</b>	0.3782	0.2433
<b>SEV5</b>	0.2806	0.3008	0.3135	0.2330	0.2271	0.3267	<b>0.8311</b>	0.3705	0.2548
<b>SEV6</b>	0.2753	0.3230	0.2400	0.2997	0.2715	0.3017	<b>0.7922</b>	0.3594	0.2584
<b>SEV7</b>	0.2753	0.2835	0.2680	0.2388	0.2386	0.2608	<b>0.7762</b>	0.3447	0.2080
<b>SEV9</b>	0.2530	0.3358	0.2683	0.1776	0.2527	0.3138	<b>0.7206</b>	0.2886	0.2235
<b>SYM2</b>	0.3109	0.2773	0.3735	0.2104	0.3271	0.3102	0.3119	<b>0.7062</b>	0.3027
<b>SYM3</b>	0.3186	0.2293	0.3930	0.1605	0.3275	0.1975	0.3444	<b>0.8260</b>	0.3079
<b>SYM4</b>	0.2785	0.2149	0.3461	0.1678	0.3171	0.2373	0.3314	<b>0.7808</b>	0.2967
<b>SYM5</b>	0.4067	0.2905	0.4418	0.2283	0.3164	0.3124	0.3468	<b>0.8314</b>	0.2441
<b>SYM6</b>	0.3944	0.2859	0.4625	0.2070	0.3132	0.2636	0.3648	<b>0.8288</b>	0.2264
<b>SYM7</b>	0.2794	0.1884	0.3030	0.1933	0.2578	0.1953	0.3964	<b>0.7317</b>	0.2619
<b>SYM8</b>	0.3227	0.2498	0.4290	0.1397	0.2980	0.1815	0.3260	<b>0.8098</b>	0.2148
<b>USE1</b>	0.2220	0.2061	0.1808	0.0982	0.3910	0.1900	0.2302	0.2146	<b>0.7551</b>
<b>USE2</b>	0.1978	0.1549	0.1859	-0.0094	0.3908	0.0482	0.2219	0.2599	<b>0.7755</b>
<b>USE3</b>	0.1540	0.2083	0.1843	0.1096	0.4205	0.1757	0.1979	0.1700	<b>0.7661</b>
<b>USE4</b>	0.2477	0.2148	0.3272	0.0740	0.5517	0.2062	0.3573	0.3797	<b>0.7739</b>
<b>USE5</b>	0.1971	0.2319	0.3202	0.0800	0.5098	0.1678	0.2101	0.2474	<b>0.7729</b>

## RESULTS OF HYPOTHESIS TESTING

The PLS model for testing measurements is selected because of its robustness and simplicity in using SmartPLS 2.0 software (Ringle, Wende & Will, 2005). The PLS method is appropriate for testing new measures to predict construct causality. In this study, we used SmartPLS 2.0 to examine the statistical significance of the model. PLS path coefficients and R-square values were used to determine the validity of our model (Chwelos et al., 2001). A bootstrapping algorithm (with 450 cases and 500 re-samples) was performed to test the statistical significance of each path coefficient using t-statistics (Chin, 1998; Hassanein & Head, 2007). All the t-values are above 1.96, as recommended by Gefen and Straub (2005), except for hypotheses H3 ( $b = 0.030$ ,  $t = 0.493$ ,  $p < 0.05$ ) and H7 ( $b = 0.111$ ,  $t = 1.892$ ,  $p < 0.05$ ). These findings confirm that all our hypotheses are significant at the confidence level of 0.05, except for H3 and H7, as shown in Table 4. This indicates that ethical values and website reliability do not play a significant role in influencing Muslim users to use Islamic websites.

TABLE 4. Hypothesis testing results

Hypothesis	Path	Mean (M)	St. Dev.	Beta	T-value	Results
<b>H1</b>	Credibility -> Use	0.107	0.114	0.108	1.984*	Supported
<b>H2</b>	Objectivity -> Use	0.131	0.162	0.142	2.067*	Supported
<b>H3</b>	Reliability -> Use	0.047	0.129	0.030	0.493	Not supported
<b>H4</b>	Identity -> Use	0.115	0.127	0.125	2.212*	Supported

<b>H5</b>	Services -> Use	0.175	0.118	0.169	2.904*	Supported
<b>H6</b>	Symbols -> Use	0.167	0.111	0.152	2.802*	Supported
<b>H7</b>	Ethical Values -> Use	0.106	0.123	0.111	1.862	Not supported
<b>H8</b>	Use -> Positive Impact	0.613	0.065	0.602	18.124**	Supported

Significance level of \* $p < 0.05$ , \*\* $p < 0.01$

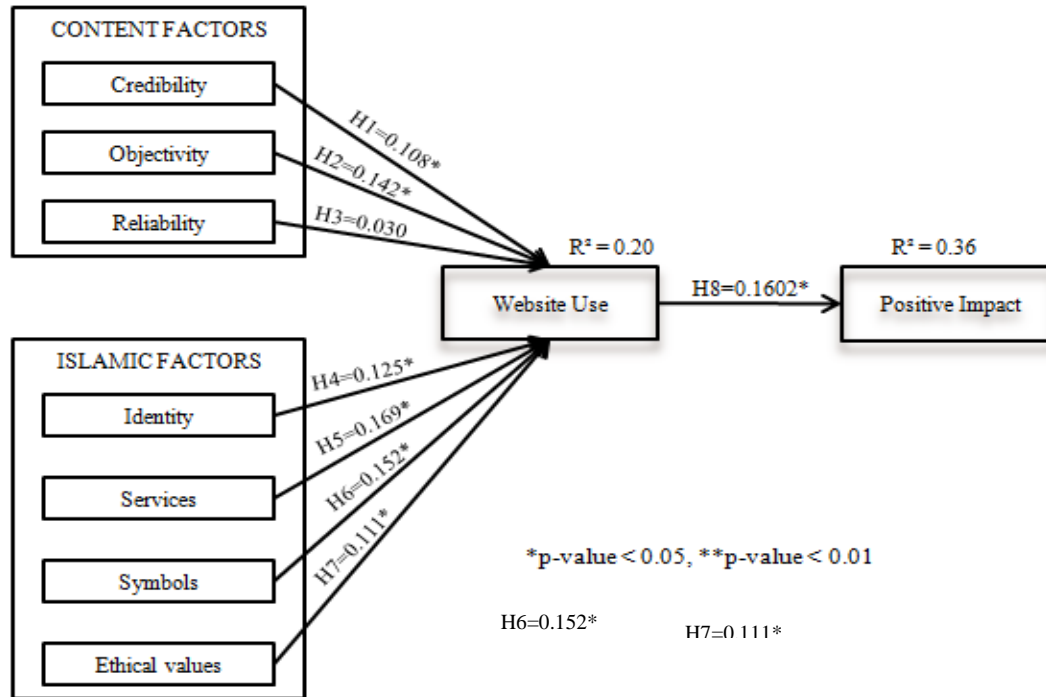


FIGURE 2. Results of the research model

The R-square value (0.200) of the endogenous construct (Use) shows 20% of the variance explained, which exceeds the 10% mark suggested by Falk and Miller (1992). Also, the R-square value (0.362) is accounted for by the variables in the model which indicates that approximately 36% of the variance in user positive impact on behaviour is due to the use of Islamic websites, as shown in Figure 2. This shows that all these eight factors are significant for website use and their positive impact on user behaviour. This further confirms the significance and validity of our model.

## CONCLUSION

The aim of this research is to explore both content and Islamic factors that influence Muslims to use Islamic websites, and their subsequent impact on users' behaviour. The result demonstrates that several factors influence use of Islamic websites. The explored content and Islamic factors were factored into seven, namely: credibility, objectivity and reliability as content factors, and ethical values, identity, services and symbols as Islamic factors. Five out of the seven factors demonstrate a direct relationship with the use of Islamic websites, while the other two factors (content reliability and Islamic ethical values) show a weak relationship. However, our findings confirm the relative significance of our measurement scale and the proposed model based on the path coefficient, t-values, and R-square explaining up to 36% variance.

Furthermore, the results from the PLS model show that the content credibility factor has only five out of ten items that were high-loaded: use of renowned Islamic books, use of

scholar's opinion (*fatwa*), website mentioned its sect (e.g. *Sunni*), ideology, and the school of thought followed. This finding indicates that Muslim users are influenced by the authenticity of the Islamic content rather than the credentials of the website owners and authors. Also, the findings show that Muslim users consider an Islamic website to be very objective when its content is free from all kinds of bias against any Islamic sources, groups or scholars. In addition, the findings reveal that Islamic website users pay less attention to the reliability of the information provided in terms of updates, completed references, links to original sources, accuracy, comprehensiveness and consistency of information, date of creation, and/or whether the information meets their expectations or not. This could be because the majority of the users do not rely only on the website(s) for seeking Islamic information. The majority of respondents indicated that they use an Islamic website monthly and spend between 0-20 minutes on it.

For the Islamic factors, findings show that Islamic symbols have a great influence on the use of Islamic websites. This means that displaying images (such as moon, hijab, mosques, scholars, etc.) that symbolize Islam readily attracts Muslims to accept the website. Also, users are attracted to use Islamic websites that follow the Islamic way of writing, consistently seeking blessings upon the prophets and their companions whenever their name is mentioned. Moreover, Islamic websites that provide several Islamic services are more likely to attract many users. This is because the majority of the Islamic online services are free: software/applications, chats/blogs/forums, educational training, community development, online marriage, online donations, and direct consultation with online scholars. Regarding, Islamic ethical values, the findings indicate that the use of Islamic websites is less likely to be influenced by the ethical values displayed by website owners. This might be because it is expected of every Muslim to portray Islamic moral values in all his/her actions especially, in Islamic teachings and practice.

Finally, the findings of this study reveal that the use of Islamic websites has a strong positive impact on user behaviour ( $b = 0.602$ ,  $t = 18.124$ ,  $p < 0.01$ ). The users indicate that both content and Islamic factors motivate them to keep using the website and encourage them to tell others about it. They also indicate that the use of Islamic website(s) increases their Islamic knowledge and practice, which consequently affects their *Iman* (faith) by bringing them closer to Allah.

Overall, the findings of this study are significant, considering the growing number of Islamic websites and Muslim Internet users in many countries. This study is one of the first to provide empirical evidence for Islamic website use and its positive impact on Muslim users, through exploring the most important content and Islamic factors. Furthermore, this study provides information on the reasons for frequency of use of Islamic websites for online Islamic activities by Muslim users.

This study is not without limitations. First, it was conducted with data collected from the students of International Islamic University Malaysia. Further studies are needed with users from different locations, contexts and time periods, in order to further confirm the reliability and validity of the scale and proposed model as well as the findings of this study. Secondly, this study was conducted using a survey method, but future studies may be conducted using experiment (i.e. laboratory website evaluation with users) to directly observe the user experience while using Islamic website(s). Thirdly, this study explored only seven factors of Islamic website use; future research may explore additional items and their related factors.

Despite the limitations of this study, it does provide valuable ground for future investigation. The research model and empirical results provide useful indicators for the direction of future research and also suggest guidelines for the successful development and

adoption of Islamic website(s) by owners and users respectively. In addition, this study contributes to the emerging body of knowledge on the use of Islamic websites from the users' perceptions.

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